GE
Measurement & Control

DPI 620 Genii

Advanced Modular Calibrator and HART®/ Foundation Fieldbus Communicator

Combines an advanced multi-function calibrator and HART /Foundation Fieldbus communicator with world-class pressure measurement and generation.

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HART COMMUNICATION PROTOCOL

Fieldbus Foundation

A flexible modular system

The Druck DPI 620 Genii Series - Advanced Modular Calibrator and HART / Fieldbus Communicator comprises four system components to provide the multi-functionality to perform duties formerly requiring a wide range of different instruments. These system components are:

- DPI 620G - Multi-function calibrator, HART/Fieldbus Communicator
- PM 620 - Interchangeable pressure modules
- MC 620G - Pressure module carrier
- PV 62XG - Pressure generating stations

Features

- Multi-function capabilities: electrical, frequency, temperature and pressure
- Complete HART communicator included
- Optional Foundation Fieldbus communicator
- Modular re-rangeable and expandable concept
- Individual components can be used as stand-alone instruments
- Allows significant inventory reductions
- Simplifies training and improves operator safety
- Reduces cost of ownership

DPI 620/G Multifunction Calibrator and Communicator

Measure and source mA, mV, V, ohms, frequency, RTD's and thermocouples.

MC 620/G Pressure Module Carrier. Securely attaches to the DPI 620/G when pressure measurement is required.

PM620 Pressure Module

Re-rangeable dual channel pressure measurement from 25 mbar (10 inH_2O) to 1000 bar (15000 psi)

PM 620

PV 62X/G Pressure Station. The DPI 620/G securely attaches to the pressure stations when pressure generation and measurement is required.

DPI 620/G

Re-rangeable pressure measurement and generation from 25 mbar (10 inH_2O) to 1000 bar (15000 psi)

DPI 620 Genii (P/N DPI620G)

This ultra-compact electrical, frequency and temperature calibrator and HART communicator provides simultaneous measurement and source capabilities for the setup, testing and calibration of most types of process instruments including transmitters, transducers, gauges/ indicators, switches, proximity detectors, counters, RTDs, thermocouples and valve positioners.

What's new in Genii compared to the old DPI 620?

- Smart phone technology touch display and new UI (User Interface) supporting gestures and swipes for a flatter menu structure and greater ease of use.
- Completely new digital platform and modems to support HART and Fieldbus applications.
- New DASHBOARD to quickly launch applications such as CALIBRATOR, HART and SETUP with new applications, including SCOPE for real time signal diagnostics.
- TASK menu allows single touch configuration for common devices such as pressure and temperature transmitters, transducers, switches, and valve positioners. User configured tasks can be added to the library.
- All first generation DPI 620 and the new Genii system components are fully interchangeable; e.g. pressure stations, pressure modules and all accessories.

Standard Dashboard Applications:

Calibrator

- One touch selection of common tasks, e.g. P to I for a pressure transmitter
- Highest accuracy for measuring, sourcing and simulating electrical, frequency, temperature and pressure
- Simulate device inputs and measure outputs simultaneously (up to 6 active channels)
- Calculates errors between inputs/outputs
- Pressure system generates 100 bar/1,500 psi pneumatic and 1000 bar/15,000 psi hydraulic pressures.
- Interchangeable pressure modules from 25 mbar/1 inH_2O to 1,000 bar/15,000 psi

Meter

- Easy to use Multi-meter
- Take measurements, test power supplies, check continuity

Scope

- Real time graphical analysis of pressure and electrical signals
- Advanced diagnostics and fault finding

HART Communicator

- View, change, clone and store device configurations
- Work off-line to create and change configurations
- Transfer device configurations to your PC
- Measure and source analogue variables without secondary calibration equipment
- No power during shutdown? Genii provides 24 V.
- Need a 230 ohm resistor? Just select from the menu.
- It's easy to upgrade Genii with free of charge software and latest DD library.

Technical Specifications

DPI 620 Genii General Specifications	
Display	Size: 110 mm (4.3 in) diagonal; 480 x 800 pixels LCD: Colour display with touch-screen
Languages	English {Default}, Chinese, French, German, Italian, Portuguese, Russian, Spanish, Dutch, Japanese
Operating temperature	-10° to 50°C (14° to 122°F)
Storage temperature	-20° to 70°C (-4° to 158°F)
Ingress Protection	IP54
Humidity	0 to 90% RH Non condensing
Shock / Vibration	BS EN 61010:2001; Def Stan 66-31, 8.4 cat III, 1 m Drop Tested
EMC	Electromagnetic compatibility: BS EN 61326-1:2006
Electrical safety	Electrical – BS EN 61010 : 2001
Pressure safety	Pressure Equipment Directive - Class: Sound Engineering Practice (SEP)
Approved	CE Marked
Size (L: W: H)	DPI 620 Genii only: 183 x114 x 42 mm (7.2 x 4.5 x 1.7 in) + MC 620/G: ≈ 265 x 114 x 64 mm (10.4 x 4.5 x 2.5 in) + PM 620: ≈ 265 x 114 x 93 mm (10.4 x 4.5 x 3.7 in)
Weight	DPI 620 Genii only: ≈ 575 g (1.3 lb) – battery included. MC 620G only: ≈ 640 g (1.4 lb). PM 620 only: ≈ 100 g (0.2 lb).
Power supply	Lithium-Polymer battery (GE Part number : IO620-Battery); Capacity: 5040 mAh (minimum), 5280 mAh (typical); Nominal voltage: 3.7 V. Charge temperature: 0° to 40°C (32° to 104°F) Discharge temperature: -20° to 60°C (-4° to 140°F). ***Note:*** *For best battery performance, keep the temperature less than 60°C (140°F).* Charge/discharge cycles: > 500 > 70% capacity.
Duration	Measure functions (CH1): ≈ 12 hours continuous. Dual Function, mA measure (CH2): ≈ 7 hours (24 V Source at 12 mA)
Connectivity	USB Type A, USB Type Mini B, WiFi IEEE 802.11g, Bluetooth

Electrical Measurement and Source

		NLH&R ±1°C (2°F) for 24 hrs (note 1)		Total Uncertainty 10° to 30°C (50° to 86°F) for 1 year (note 3)		Additional error -10° to 10°C (14° to 50°F) 30° to 50°C (86° to 122°F)		Resolution	Display reading window	
		%Rdg	+ %FS	%Rdg	+ %FS	%Rdg/°C	+ %FS/°C			
Measure mode										
DC Voltage	Thermocouple	Please refer to Thermocouple specification table							CH1	
	TC mode -10 to 100 mV	0.0045	0.008	0.007	0.01	0	0.0005	0.001	CH1	
	± 200 mV	0.0045	0.004	0.01	0.005	0	0.0005	0.001	CH1	CH2
	± 2000 mV	0.004	0.003	0.0095	0.005	0	0.0005	0.01	CH1	CH2
	± 20 V	0.0025	0.002	0.0145	0.002	0	0.0005	0.00001	CH1	CH2
	± 30 V	0.0035	0.0035	0.0145	0.004	0	0.0005	0.0001	CH1	CH2
AC Voltage[1]*	0 to 2000 mVAC	0.125	0.125	0.2	0.15	0.005	0.005	0.1	CH1	
	0 to 20 VAC	0.1255	0.125	0.2	0.15	0.005	0.005	0.001	CH1	
	0 to 300 VAC	1	0.06	1.5	0.1	0.05	0.005	0.01	CH1	
Current	± 20 mA	0.006	0.005	0.012	0.006	0	0.0005	0.0001	CH1	CH2
	± 55 mA	0.005	0.005	0.016	0.005	0	0.0005	0.0001	CH1	CH2
Resistance	RTD	Please refer to RTD specification table							CH1	
(True,	0 to 400 Ω	0.0055	0.001	0.009	0.0012	0	0.0005	0.001	CH1	
4 wire)	0 to 4000 Ω	0.0055	0.001	0.009	0.0012	0	0.0005	0.01	CH1	
Resistance	RTD	Please refer to RTD specification table							CH1	
(4 wire)	0 to 400 Ω	0.012	0.005	0.015	0.006	0	0.001	0.001	CH1	
	0 to 4000 Ω	0.0115	0.0045	0.015	0.006	0	0.001	0.01	CH1	
Frequency	0 to 1000 Hz	0.0003	0.0002	0.003	0.0002			0.0001	CH1	
	1 kHz to 5 kHz**	0.0003	0.0004	0.003	0.0004			0.00001	CH1	
	0 to 999999 CPM	Refer to range table above for equivalent frequency						0.01	CH1	
	0 to 999999 CPH	Refer to range table above for equivalent frequency						0.01	CH1	
	Totalizing counter	Maximum count 9999999						1	CH1	
	Trigger level	Automatic and adjustable 0 to 20 V						0.1		
Pressure	25 mbar to 1000 bar (0.35 psi to 15000 psi)	Please refer to PM 620 pressure range table							P1	P2
	IDOS external module	Please refer to IDOS UPM datasheet. Cable P/N IO620-IDOS-USB+IO620-USB-PC required							IDOS	
	USB port	Please refer to GE Measurement & Control for compatible devices							USB	
Source mode										
DC Voltage	TC mode	Please refer to Thermocouple specification table								
	TC mode -10 to 100 mV	0.009	0.008	0.014	0.01	0	0.0005	0.001	CH1	
	0 to 200 mV	0.0045	0.004	0.01	0.005	0	0.0005	0.1	CH1	
	0 to 2000 mV	0.004	0.003	0.009*	0.005	0	0.0005	0.1	CH1	
	0 to 20 V	0.006	0.0035	0.0145	0.0035	0	0.0005	0.001	CH1	
Current	0 to 24 mA	0.01	0.004	0.015	0.005	0	0.0005	0.001	CH1	CH2
	0 to 24 mA (Internal loop power)	0.01	0.004	0.015	0.005	0	0.0005	0.001		CH2
	24 V loop power		Selectable 24 V +/- 10% or 28V +/-10%							
Resistance	RTD	Please refer to RTD specification table							CH1	
	0 to 400 Ω (0.1mA)	0.024	0.0035	0.03	0.0075	0	0.001	0.01	CH1	
	0 to 400 Ω (0.5mA)	0.004	0.0025	0.008	0.003	0	0.001	0.01	CH1	
	400 to 2000 Ω (0.05mA)	0.048	0.0035	0.06	0.006	0	0.001	0.01	CH1	
	2k to 4 kΩ (0.05mA)	0.048	0.0035	0.06	0.0045	0	0.001	0.01	CH1	
	Maximum input current	0-400 Ω 5 mA, 400-2000 Ω 1mA, 2000-4000 Ω 0.5 mA								
Frequency	0 to 1000 Hz	0.0003	0.00023	0.003	0.00023			0.1	CH1	
	1kHz to 5 kHz**	0.0003	0.000074	0.003	0.000074			0.001	CH1	
	Output waveform	Square, positive swing up to 20V (adjustable), negative swing -120mV (fixed) Sine and Triangular, adjustable amplitude and offset within the limits -2.5 to +20 V								
	Square wave peak output	0 to 20V +/-20mV (6 mA maximum)								
	0 to 99999 CPM	Please refer to range table above for equivalent frequency						1	CH1	
	0 to 99999 CPH	Please refer to range table above for equivalent frequency						1	CH1	
	Totalizing counter	Maximum count 1000000. Rate 1 to 50,000 pulses/sec						1	CH1	

Notes:

1. Specification applies, 45 to 65Hz and between 10% and 100% of full scale.
2. Specification applies when calibration temperature is between 10 and 30°C
3. Maximum input current for ohms simulation: 0-400 _ 5 mA, 400-2000 _ 1mA, 2000-4000 _ 0.5 mA

Multiple parameter display capability

The display can be configured to show a maximum of 6 simultaneous reading windows as follows: CH1, CH2, P1, P2, IDOS, HART

"True Ohms" RTD Measure Mode (4-wire)

Type	Temperature coefficient	Temperature range				Total Uncertainty 10° to 30°C (50° to 86°F) for 1 year		
		°C		°F		Rdg	Tos	
		From	To	From	To	%	°C	°F
Pt 50	3.85	-200.00	0.00	-328.00	32.00	0.012	0.05	0.09
		0.00	850.00	32.00	1562.00	0.012	0.05	0.09
Pt 100	3.85	-200.00	0.00	-328.00	32.00	0.012	0.04	0.07
		0.00	850.00	32.00	1562.00	0.012	0.04	0.07
Pt 100	3.92	-200.00	0.00	-328.00	32.00	0.012	0.04	0.07
		0.00	850.00	32.00	1562.00	0.012	0.04	0.07
Pt 200	3.85	-200.00	0.00	-328.00	32.00	0.01	0.03	0.051
		0.00	260.00	32.00	500.00	0.01	0.03	0.051
		260.00	850.00	500.00	1562.00	0.015	0.077	0.14
Pt 500	3.85	-200.00	-60.00	-328.00	-76.00	0.01	0.026	0.044
		-60.00	0.00	-76.00	32.00	0.015	0.05	0.086
		0.00	850.00	32.00	1562.00	0.012	0.05	0.086
Pt 1000	3.85	-200.00	-150.00	-328.00	-238.00	0.009	0.024	0.04
		-150.00	0.00	-238.00	32.00	0.011	0.036	0.061
		0.00	850.00	32.00	1562.00	0.012	0.036	0.061
Cu 10	4.27	-200.00	0.00	-328.00	32.00	0.00	0.14	0.25
		0.00	260.00	32.00	500.00	0.00	0.17	0.3
D 100	6.18	-200.00	0.00	-328.00	32.00	0.01	0.035	0.06
		0.00	640.00	32.00	1184.00	0.012	0.035	0.06
Ni 100	6.72	-60.00	0.00	-76.00	32.00	0.00	0.026	0.047
		0.00	250.00	32.00	482.00	0.00	0.03	0.055
Ni 120	6.72	-80.00	0.00	-112.00	32.00	0.00	0.022	0.04
		0.00	270.00	32.00	518.00	0.00	0.028	0.05
		270.00	320.00	518.00	608.00	0.00	0.057	0.1

Standard RTD Measure Mode (4-wire)

Type	Temperature coefficient	Temperature range				Total Uncertainty 10° to 30°C (50° to 86°F) for 1 year		
		°C		°F		Rdg	Tos	
		From	To	From	To	%	°C	°F
Pt 50	3.85	-200.00	0.00	-328.00	32.00	0.021	0.16	0.28
		0.00	850.00	32.00	1562.00	0.024	0.16	0.28
Pt 100	3.85	-200.00	0.00	-328.00	32.00	0.017	0.1	0.175
		0.00	850.00	32.00	1562.00	0.0215	0.1	0.174
Pt 100	3.92	-200.00	0.00	-328.00	32.00	0.017	0.1	0.175
		0.00	850.00	32.00	1562.00	0.0215	0.1	0.174
Pt 200	3.85	-200.00	0.00	-328.00	32.00	0.017	0.069	0.12
		0.00	260.00	32.00	500.00	0.018	0.069	0.12
		260.00	850.00	500.00	1562.00	0.033	0.33	0.6
Pt 500	3.85	-200.00	-60.00	-328.00	-76.00	0.0165	0.051	0.09
		-60.00	0.00	-76.00	32.00	0.017	0.16	0.29
		0.00	850.00	32.00	1562.00	0.024	0.16	0.28
Pt 1000	3.85	-200.00	-150.00	-328.00	-238.00	0.016	0.044	0.074
		-150.00	0.00	-238.00	32.00	0.018	0.1	0.175
		0.00	850.00	32.00	1562.00	0.0215	0.1	0.174
Cu 10	4.27	-200.00	0.00	-328.00	32.00	0.035	0.66	1.18
		0.00	260.00	32.00	500.00	0.01	0.66	1.18
D 100	6.18	-200.00	0.00	-328.00	32.00	0.019	0.1	0.174
		0.00	640.00	32.00	1184.00	0.02	0.1	0.174
Ni 100	6.72	-60.00	0.00	-76.00	32.00	0.00	0.071	0.13
		0.00	250.00	32.00	482.00	0.002	0.071	0.13
Ni 120	6.72	-80.00	0.00	-112.00	32.00	0.00	0.06	0.11
		0.00	270.00	32.00	518.00	0.00	0.06	0.11
		270.00	320.00	518.00	608.00	0.00	0.2	0.36

RTD Simulate Mode (0.1mA min, 0-400Ω; 0.05mA min, 400-4000Ω)

Type	Temperature coefficient	Temperature range				Total Uncertainty 10° to 30°C (50° to 86°F) for 1 year		
		°C		°F		Rdg	Tos	
		From	To	From	To	%	°C	°F
Pt 50	3.85	-200.00	0.00	-328.00	32.00	0.043	0.24	0.42
		0.00	850.00	32.00	1562.00	0.043	0.24	0.42
Pt 100	3.85	-200.00	0.00	-328.00	32.00	0.04	0.16	0.28
		0.00	850.00	32.00	1562.00	0.04	0.16	0.28
Pt 100	3.92	-200.00	0.00	-328.00	32.00	0.04	0.16	0.28
		0.00	850.00	32.00	1562.00	0.04	0.16	0.28
Pt 200	3.85	-200.00	0.00	-328.00	32.00	0.0345	0.12	0.21
		0.00	260.00	32.00	500.00	0.0345	0.12	0.21
		260.00	850.00	500.00	1562.00	0.087	0.28	0.48
Pt 500	3.85	-200.00	-60.00	-328.00	-76.00	0.033	0.095	0.16
		-60.00	0.00	-76.00	32.00	0.078	0.23	0.39
		0.00	850.00	32.00	1562.00	0.078	0.23	0.39
Pt 1000	3.85	-200.00	-150.00	-328.00	-238.00	0.032	0.085	0.15
		-150.00	0.00	-238.00	32.00	0.0675	0.19	0.32
		0.00	260.00	32.00	500.00	0.0675	0.19	0.32
		260.00	850.00	500.00	1562.00	0.082	0.17	0.28
Cu 10	4.27	-200.00	0.00	-328.00	32.00	0.00	0.85	1.53
		0.00	260.00	32.00	500.00	0.00	0.92	1.66
D 100	6.18	-200.00	0.00	-328.00	32.00	0.038	0.16	0.28
		0.00	640.00	32.00	1184.00	0.038	0.16	0.28
Ni 100	6.72	-60.00	0.00	-76.00	32.00	0.00	0.12	0.22
		0.00	250.00	32.00	482.00	0.00	0.12	0.22
Ni 120	6.72	-80.00	0.00	-112.00	32.00	0.00	0.11	0.2
		0.00	270.00	32.00	518.00	0.00	0.11	0.2
		270.00	320.00	518.00	608.00	0.00	0.25	0.45

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Note:

These figures relate to DPI 620 Genii uncertainties only.

For RTD Measure and Source functions the uncertainty is given by:-

Urtd = T(°C) x %Rdg + Tos (°C)

or

Urtd = T(°F) x%Rdg + Tos (°F)

where T( ) is the measurement expressed in °C or °F.

Measurement resolution:
0.01 °C/F. Simulation resolution 0.1 °C/F

Excitation current:

Measure mode 0 to 400Ω 2.5mA, 400Ω to 4000Ω 0.5mA;

Simulate mode 0 to 400 Ω 5mA max, 0.4 to 2kΩ 1mA max and 2 to 4kΩ 0.5mA max.

Simulate mode pulsed excitation current minimum duration 10 ms

Specifications relate to DPI 620 Genii uncertainties only.

Measurement resolution 0.01 °C/F. Simulation resolution 0.1 °C/F

Cold Junction (CJ) Error (maximum)

Range: 10 to 30°C (50 to 86°F) = 0.2°C (0.4°F)

Add 0.01°C (0.02°F) CJ Error/° ambient temperature change for ranges: -10 to 10°C, 30 to 50°C (14 to 50°F, 86 to 122°F)

Thermocouple Measurement and Simulation

Type	Standard	Temperature range (range shows correct resolution)				Total Uncertainty 10° to 30°C (50° to 86°F) for 1 year	
		°C		°F		°C	°F
		From	To	From	To		
B	IEC 584	250.00	500.00	482.00	932.00	4.00	7.20
		500.00	700.00	932.00	1292.00	2.00	3.60
		700.00	1200.00	1292.00	2192.00	1.50	2.70
		1200.00	1820.00	2192.00	3308.00	1.00	1.80
E	IEC 584	-270.00	-200.00	-454.00	-328.00	2.00	3.60
		-200.00	-120.00	-328.00	-184.00	0.50	0.90
		-120.00	1000.00	-184.00	1832.00	0.25	0.45
J	IEC 584	-210.00	-140.00	-346.00	-220.00	0.50	0.90
		-140.00	1200.00	-220.00	2192.00	0.30	0.54
K	IEC 584	-270.00	-220.00	-454.00	-364.00	4.00	7.20
		-220.00	-160.00	-364.00	-256.00	1.00	1.80
		-160.00	-60.00	-256.00	-76.00	0.50	0.90
		-60.00	800.00	-76.00	1472.00	0.30	0.54
		800.00	1370.00	1472.00	2498.00	0.50	0.90
L	DIN 43710	-200.00	-100.00	-328.00	-148.00	0.40	0.72
		-100.00	900.00	-148.00	1652.00	0.25	0.45
N	IEC 584	-270.00	-200.00	-454.00	-328.00	7.00	12.60
		-200.00	-40.00	-328.00	-40.00	1.00	1.80
		-40.00	1300.00	-40.00	2372.00	0.40	0.72
R	IEC 584	-50.00	360.00	-58.00	680.00	3.00	5.40
		360.00	1760.00	680.00	3200.00	1.00	1.80
S	IEC 584	-50.00	70.00	-58.00	158.00	3.00	5.40
		70.00	320.00	158.00	608.00	1.50	2.70
		320.00	660.00	608.00	1220.00	1.10	1.98
		660.00	1740.00	1220.00	3164.00	1.00	1.80
T	IEC 584	-270.00	-230.00	-454.00	-382.00	3.00	5.40
		-230.00	-50.00	-382.00	-58.00	1.00	1.80
		-50.00	400.00	-58.00	752.00	0.30	0.54
U	DIN 43710	-200.00	-50.00	-328.00	-58.00	0.60	1.08
		-50.00	600.00	-58.00	1112.00	0.30	0.54
C		0.00	1600.00	32.00	2912.00	0.80	1.44
		1600.00	2000.00	2912.00	3632.00	1.00	1.80
		2000.00	2300.00	3632.00	4172.00	1.40	2.52
D		0.00	100.00	32.00	212.00	1.10	1.98
		100.00	270.00	212.00	518.00	0.80	1.44
		270.00	1200.00	518.00	2192.00	0.60	1.08
		1200.00	1800.00	2192.00	3272.00	0.80	1.44

PM 620 Pressure Modules

Features

- Fully interchangeable with no need for set-up or calibration
- Simple screw fit - hand tight no tools required
- Ranges from 25 mbar to 1000 bar (10 inH_2O to 15000 psi)
- Accuracy from 0.005% FS

The PM 620 is the latest development in digital output sensor technology incorporating a number of key innovations to allow pressure re-ranging of compatible equipment. A simple screw fit makes both the pressure and electrical connections without the need for tools, sealing tape, cables or plugs and digital characterisation allows interchangeability without set-up or calibration.

MC 620/G Module Carrier

Features

- 2 independent pressure channels
- Simple to re-range
- Pressure protection

The MC 620/G module carrier attaches the head of the DPI 620/G to provide two independent pressure measurement channels. These can be fitted with any PM 620 pressure module from 25 mbar to 1000 bar (10 inH_2O to 15000 psi). A simple screw fit means no tools are required and ensures both a high integrity pressure seal and a reliable digital interface. Even the pressure adapters are interchangeable and only require a finger tight fit.

The carrier is designed for pressure safety and will automatically seal if a module is not fitted or if the user attempts to remove it.

MC 620/G Specification	
Maximum pressure	400 bar (5800 psi) pneumatic 1000 bar (15000 psi) hydraulic
Pressure media	Compatible with stainless steel and nitrile seals
Pressure safety	Pressure equipment directive class SEP
Size and weight	80 mm x 100 mm x 110 mm, 640 g

PM 620 Specification

Maximum intermittent pressure	2 x FS
Maximum working pressure	110% FS
Sealing	IP 65 (protected against dust and jets of water)
Operating temperature	-10 to 50°C (14 to 122°F)
Storage temperature	-20 to 70°C (-4 to 158°F)
Humidity	0 to 90% RH non condensing
Shock and vibration	BS EN 61010:2001; Def stan 66-31, 8.4 cat III), 1 m Drop Tested
EMC	BS EN 61326-1:2006
Electrical safety	BS EN 61010:2001
Pressure safety	Pressure equipment directive class SEP
Approval	CE marked
Size and weight	L. 56 mm, Dia. 44 mm, 106 g maximum

Gauge Ranges (referenced to atmosphere)

		Media	NLH&R 20°C ±2°C (68°F ± 4°F) 24 hr	NLH&R 0° to 50°C (32° to 122°F) 24 hr	Total uncertainty 0° to 50°C (32° to 122°F) for 1 year
			Gauge	Gauge	Gauge
bar	psi		%FS	%FS	%FS
±0.025	±10 inH_2O	1	0.090	0.090	0.100
±0.07	±1	1	0.025	0.030	0.047
±0.2	±3	1	0.020	0.027	0.045
±0.35	±5	2	0.020	0.025	0.044
±0.7	±10	2	0.015	0.020	0.041
±1	-14.5 to 15	2	0.015	0.020	0.041
-1 to 2	-14.5 to 30	2	0.015	0.020	0.025
-1 to 3.5	-14.5 to 50	2	0.010	0.020	0.025
-1 to 7	-14.5 to 100	2	0.010	0.020	0.025
-1 to 10	-14.5 to 150	2	0.005	0.020	0.025
-1 to 20	-14.5 to 300	2	0.005	0.020	0.025
0 to 35	0 to 500	2	0.005	0.020	0.025
0 to 70	0 to 1000	2	0.005	0.020	0.025
0 to 100	0 to 1500	2	0.005	0.020	0.025
0 to 135	0 to 2000	2	0.005	0.020	0.025
0 to 200	0 to 3000	2	0.005	0.020	0.025

NLH&R Non-linearity, hysteresis and repeatability
❶ Compatible with non-corrosive gas/fluid
❷ Compatible with stainless steel
* The reading can be referenced to ambient air pressure via a software feature of the DPI 620 Genii, allowing the same module to be switched between absolute and sealed gauge measurement

DPI 620 Genii pressure resolution: adjustable 4 to 7 digits. Uncertainty confidence level 95% (K=2)

Absolute Ranges (referenced to vacuum)

		Media	NLH&R 20°C ±2°C (68°F ± 4°F) 24 hr	NLH&R 20°C ±2°C (68°F ± 4°F) 24 hr	NLH&R 0° to 50°C (32° to 122°F) 24 hr	NLH&R 0° to 50°C (32° to 122°F) 24 hr	Total uncertainty 0° to 50°C (32° to 122°F) for 1 year	
			Absolute	*Sealed Gauge	Absolute	*Sealed Gauge	Absolute	*Sealed Gauge
bar	psi		%FS	%FS	%FS	%FS	*%FS	%FS
0 to 0.35	0 to 5	2	0.030		0.050		0.080	
0 to 1.2	0 to 35 inHg	2	0.020		0.036		0.070	
0 to 2	0 to 30	2	0.015		0.036		0.052	
0 to 3.5	0 to 50	2	0.015		0.036		0.050	
0 to 7	0 to 100	2	0.015		0.036		0.050	
0 to 10	0 to 150	2	0.015	0.005	0.030	0.020	0.047	0.025
0 to 20	0 to 300	2	0.015	0.005	0.030	0.020	0.047	0.025
0 to 35	0 to 500	2	0.015	0.005	0.030	0.020	0.047	0.025
0 to 70	0 to 1000	2	0.015	0.005	0.030	0.020	0.047	0.025
0 to 100	0 to 1500	2	0.015	0.005	0.030	0.020	0.046	0.025
0 to 135	0 to 2000	2	0.015	0.005	0.030	0.020	0.046	0.025
0 to 200	0 to 3000	2	0.015	0.005	0.030	0.020	0.046	0.025
0 to 350	0 to 5000	2	0.015	0.005	0.033	0.020	0.049	0.025
0 to 700	0 to 10000	2	0.015	0.005	0.033	0.020	0.049	0.025
0 to 1000	0 to 15000	2	0.015	0.005	0.033	0.020	0.049	0.025

The PV 621/G, 622/G and 623/G Pressure Stations

Features

- A uniquely capable, re-rangeable and self contained pressure test system
- Advanced pressure generation
  - 95% vacuum to 20 bar (300 psi) pneumatic
  - 95% vacuum to 100 bar (1500 psi) pneumatic
  - 0 to 1000 bar (15000 psi) hydraulic
- Stand alone replacements for hand pumps
- Bench top use as comparators

There are three pressure generation stations: the PV 621/G, a pneumatic pressure generator for pressures 95% vacuum to 20 bar (300 psi); the PV 622/G, a pneumatic pressure generator for pressures 95% vacuum to 100 bar (1500 psi); and the PV 623/G, a hydraulic pressure generator for pressures up to 1000 bar (15000 psi). Each pressure station is designed for stand-alone operation as a pressure generator and can replace conventional hand pumps to provide greater efficiency and ease of use. They can also be used on the workbench as comparators.

Combining any of the pressure stations with a PM 620 pressure module and the DPI 620/G calibrator creates a uniquely capable, self-contained pressure calibrator.

PV 621/G, 622/G and 623/G Specification	
Maximum pressure	PV 621/G 20 bar (300 psi) pneumatic PV 622/G 100 bar (1500 psi) pneumatic PV 623/G 1000 bar (15000 psi) hydraulic
Pressure media	PV 621/G and PV 622/G non-corrosive gases, PV 623/G de-mineralized water or mineral oil (ISO viscosity grade < 22)
Operating temperature	-10° to 50°C (14° to 122°F) For water +4 to +50°C (39 to 122°F)
Storage temperature	-20 to 70°C (-4 to 158°F) (must be empty of water)
Shock and vibration	BS EN 61010:2001; Def stan 66-31, 8.4 cat III, 1 m drop tested
Pressure safety	Pressure equipment directive class SEP
Size and weight	450 mm x 280 mm x 235 mm, PV 621/G 2.65 kg, PV 622/G 3.30 kg, PV 623/G 3.75 kg

PV 622G

Ordering Information

All DPI 620/DPI620G series products are compatible with each other. For the intrinsically safe DPI620IS and compatible accessories, please refer to the DPI620IS datasheet.

Please order the following model numbers and part numbers as separate line items.

Model DPI 620G
Genii advanced modular calibrator and HART communicator
Model DPI 620G FF
Genii advanced modular calibrator and HART/Fieldbus communicator

The DPI 620/G are supplied with a rechargeable lithium polymer battery P/N IO620-BATTERY, universal mains adaptor/charger P/N IO620-PSU, IO620-AC 300 VAC true rms measurement probe, test leads, calibration certificate, and quick reference guide.

Model MC620G
Genii pressure module carrier
Supplied with G 1/8 female and 1/8 NPT female adaptors (2 of each).

Model PM 620 "pressure range" and "type"
Pressure module. Supplied with calibration certificate.
e.g., PM 620 20 bar (300 psi) gauge

Model PV621G
Pneumatic pressure station 20 bar (300 psi)
Model PV622G
Pneumatic pressure station 100 bar (1500 psi)
Model PV623G
Pressure station 1000 bar (15000 psi)

The PV 621/G, 622/G and 623/G are supplied with G1/8 female and 1/8 NPT female adaptors, carry strap, and quick reference guide. In addition, the PV 623/G includes a plastic bottle for hydraulic fluid.

DPI 620/G Accessories

Replacement AC voltage measurement probe (P/N IO620-AC)

Attaches to the DPI 620/G 30 V sockets to provide 300 VAC true rms measurement. P/N IO620-AC is supplied as standard with all new DPI 620/G.

Carrying case (P/N IO620-CASE-1)

A protective carrying case with belt loop, shoulder strap and large pocket for test leads and accessories.

System carrying case (P/N IO620-CASE-2)

A protective carrying case for system components including the DPI 620/G, MC 620/G, PM 620 modules, test leads, hose and adaptors.

Spare/replacement lithium polymer rechargeable battery (P/N IO620-BATTERY)

Spare/replacement battery for the DPI 620/G. P/N IO620-BATTERY is supplied as standard with all new DPI 620/G.

Battery charging station (P/N IO620-CHARGER)

This external battery charging station allows a spare battery to be charged independently of the DPI 620/G for minimum instrument down time. Power is provided by the standard mains adaptor (P/N I0620-PSU). A complete charge cycle takes approximately 6.5 hours. Simultaneously, the DPI 620/G can be connected via a USB cable to provide a top-up charge (full charge in 13 hours).

Spare/replacement mains adaptor (P/N IO620-PSU)

A spare/replacement universal mains adaptor for use with DPI 620/G and P/N IO620-CHARGER. Input voltage 100 to 240 VAC 50/60 Hz. Mains socket adaptors are provided. P/N IO620-PSU is supplied as standard with all new DPI 620/G.

USB cable (P/N IO620-USB-PC)

Connects the DPI 620/G to a PC.

IDOS to USB converter (P/N IO620-IDOS-USB)

Allows connection of an IDOS universal pressure module to the DPI 620/G. P/N IO620-USB-PC is also required to connect the converter to the DPI 620/G USB port.

USB to RS 232 cable (P/N IO620-USB-RS232)

Connects the DPI 620/G to an RS 232 interface.

PV 621/G, 622/G, 623/G and MC 620/G Accessories

Dirt moisture trap

Prevents contamination of the PV 621/G and 622/G pneumatic systems and cross contamination from one device under test to another. The IDT connects directly to the PV 621/G and 622/G pressure port and replicates the quick fit connection for compatibility with the hose and adaptor kits
P/N IO620-IDT621: Maximum working pressure 20 bar (300 psi)
P/N IO620-IDT622: Maximum working pressure 100 bar (1500 psi)

Pressure relief valve

When fitted to a PV 62X/G pressure station protects the PM 620 pressure module and the device under test from overpressure.

Relief Valve Table

Part number	For use with	Factory setting		Adjustable range	
		bar	psi	bar	psi
IO620-PRV-P1	PV 621G PV 622G	1	15	0.2 to 1	3 to 15
IO620-PRV-P2	PV 621G PV 622G	5	100	3 to 7	45 to 100
IO620-PRV-P3	PV 621G PV 622G	30	435	16 to 32	230 to 460
IO620-PRV-P4	PV 622G	60	870	30 to 60	435 to 870
IO620-PRV-P5	PV 622G	100	1500	60 to 100	870 to 1500
IO620-PRV-P6	PV 621G PV 622G	3	45	1.1 to 3	16 to 45
IO620-PRV-P7	PV 621G PV 622G	12	170	6.1 to 12	90 to 170
IO620-PRV-P8	PV 621G PV 622G	18	260	12.1 to 18	175 to 260
IO620-PRV-H1	PV 623G	50	725	10 to 50	145 to 725
IO620-PRV-H2	PV 623G	200	3000	50 to 200	725 to 2900
IO620-PRV-H3	PV 623G	400	6000	200 to 400	2900 to 5800
IO620-PRV-H4	PV 623G	700	10000	300 to 700	4350 to 10000
IO620-PRV-H5	PV 623G	1000	15000	600 to 1000	8700 to 15000

Pressure station carrying case (P/N IO620-CASE-3)

A protective carrying case with shoulder strap and large pocket for accessories. Also accommodates the assembled system including the DPI 620/G and PM 620.

Modular system transit case (P/N IO620-CASE-4)

A rigid transit case with wheels and an extendable handle. Accommodates two PV 62X/G pressure stations, DPI 620/G, MC 620/G and PM 620 modules, with ample storage space for accessories. Size: 736 mm x 554 mm x 267 mm. Weight: 8,5 kg empty

Pneumatic hose kit

A high pressure pneumatic hose rated to 400 bar (5800 psi). Tool less quick fit to the PV 621/G, PV 622/G and MC 620/G pressure ports. Terminated with a quick fit connector compatible with the test point adaptors supplied with the PV 62X/G, MC 620/G and the adaptor sets.
P/N IO620-HOSE-P1: 1 metre pneumatic hose kit
P/N IO620-HOSE-P2: 2 metre pneumatic hose kit

Hydraulic hose kit

A high pressure hydraulic hose rated to 1000 bar (15000 psi). Tool less quick fit to the PV 623/G and MC 620/G pressure ports. Terminated with a quick fit connector compatible with the test point adaptors supplied with the PV 62X/G, MC 620/G and the adaptor sets.
P/N IO620-HOSE-H1: 1 metre hydraulic hose kit
P/N IO620-HOSE-H2: 2 metre hydraulic hose kit

Pressure adaptor set

A set of test point adaptors to connect the tool less quick fit PV 62X/G, MC 620/G and the extension hoses to the device under test.
P/N IO620-BSP: G1/8 male and G¼ male, G¼ female, G3/8 female and G½ female
P/N IO620-NPT: 1/8" male and ¼"male, ¼" female, 3/8" female, and ½" female
P/N IO620-MET: 14 mm and 20 mm female

Comparator adaptor (P/N IO620-COMP)

Allows the PV 62X/G pressure station to be used as a comparator. The adaptor connects to the stations pressure port and provides two outlet ports for making gauge comparisons. Compatible with the test point adaptors supplied with the PV 62X/G and the adaptor sets.

Blanking plug (P/N IO620-BLANK)

Allows the PV 621/G and 622/G to be used as pressure generators independently of the DPI 620/G and PM 620 by blanking the PV 62X/G pressure module port. Not required for the PV 623/G as the port is self-sealing.

DPI 104 Gauge adaptor (P/N IO620-104 ADAPT)

Allows a DPI 104 digital pressure gauge to be connected to the PV 62X/G pressure module port in place of DPI 620/G and PM 620 to provide a simple low cost pressure calibrator.

GE
Sensing & Inspection Technologies

Druck PV 62x

pneumatic/hydraulic pressure stations

safety and quick reference guide - K0458

A1.1

PV 621: Pneumatic pressure station (Figure A2.1)
-950 mbar to 20 bar (-13.5 to 300 psi)
PV 622: Pneumatic pressure station (Figure A2.2)
-950 mbar to 100 bar (-13.5 to 1500 psi)
PV 623: Hydraulic pressure station (Figure A2.3)
0 to 1000 bar (0 to 15000 psi)

A1.2 PV 62x + DPI 620 + PM 620

Recommended pressure modules (PM 620) * (Figure B1/B2)	
PV 621 models	25 mbar to 20 bar (0.36 to 300 psi)
PV 622 models	25 mbar to 100 bar (0.36 to 1500 psi)
PV 623 models	70 to 1000 bar (1000 to 15000 psi)

***Caution: To prevent damage to the PM 620 module, only use it within the specified pressure limit on the label.**

A1.3 PV 62x pressure relief valves (PRV)
(Recommended options)

Parts: IO620-PRV-P1 to P5 (Pneumatic)	
PV 621 models	1 to 30 bar (14.5 to 435 psi)
PV 622 models	1 to 100 bar (14.5 to 1500 psi)
Parts: IO620-PRV-H1 to H5 (Hydraulic)	
PV 623 models	50 to 1000 bar (725 to 15000 psi)

Note: *◁ = See figure, table, or section.*

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Trademarks

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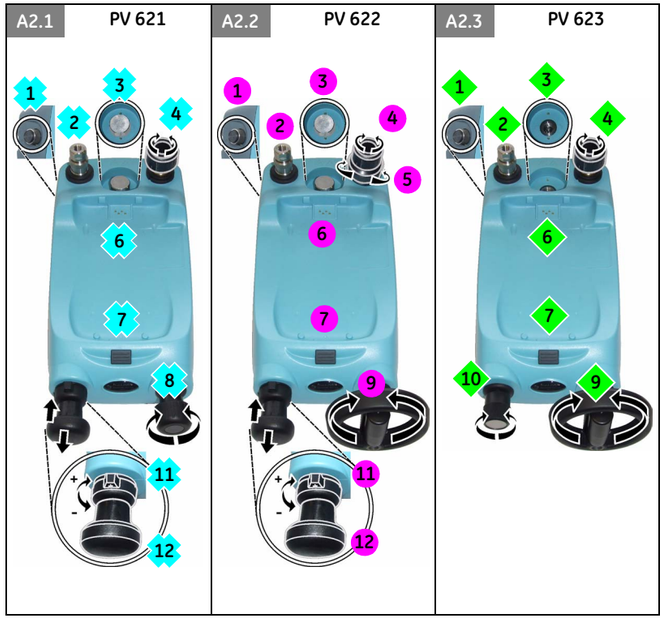
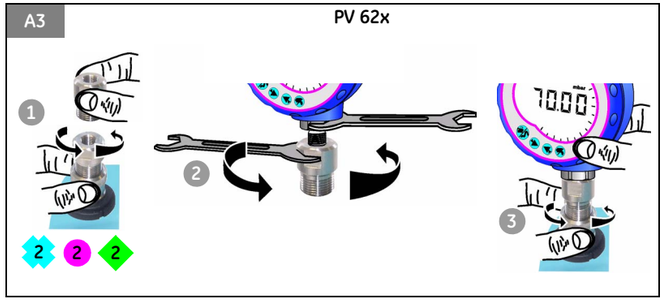
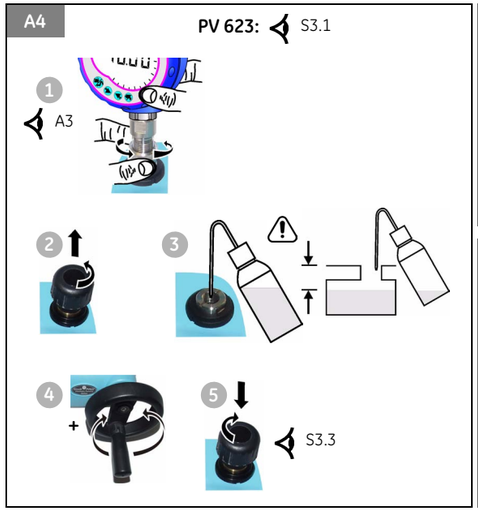
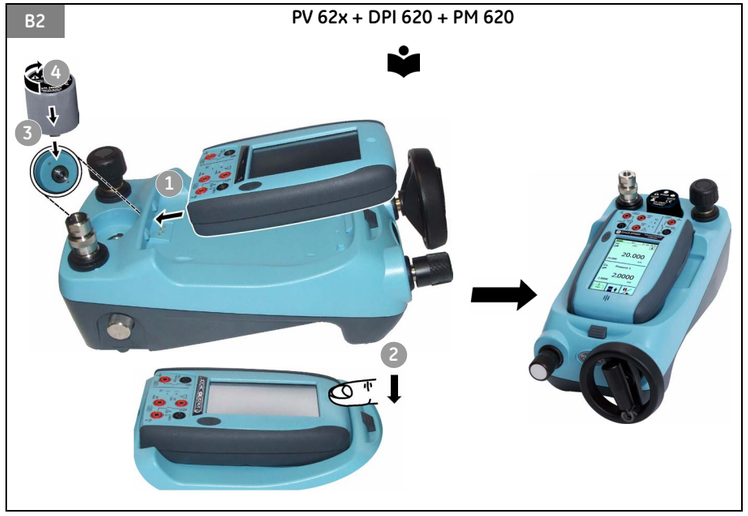








Customer service

Visit our web site: www.gesensing.com

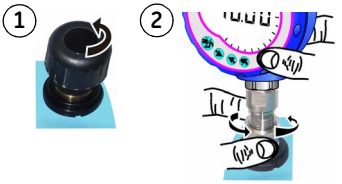
Quick Reference

WARNING: Before you use this instrument, read and understand the "Safety" section. It is dangerous to ignore the specified warnings.

S1 PV 621 models: Start operations

A2.1 (Front cover)

S1.1 Release the pressure/Attach the device under test



Step	Procedure	
1.	Release the pressure.	4
2.	Use the applicable adaptor to attach the device; figure A3.	2

S1.2 Vacuum OR pressure operation

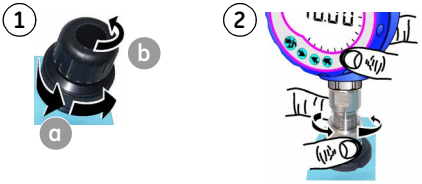
Step	Procedure (Vacuum)	
1.	Set to vacuum operation (-).	11
2.	Turn the volume adjuster to mid-range or fully clockwise.	8
3.	Seal the system.	4
4.	Set the vacuum with the pump.	12
5.	Adjust the vacuum (+ decrease; - increase).	8

Step	Procedure (Pressure)	
1.	Set to pressure operation (+).	11
2.	Turn the volume adjuster to mid-range.	8
3.	Seal the system.	4
4.	Set the pressure with the pump.	12
5.	Adjust the pressure (+ increase; - decrease).	8

S2 PV 622 models: Start operations

A2.2 (Front cover)

S2.1 Release the pressure/Attach the device under test



Step	Procedure	
1.	Release the pressure: Open the refill valve (1 turn) then fully open the pressure release valve.	5 4
2.	Use the applicable adaptor to attach the device; figure A3.	2

S2.2 Vacuum OR pressure operation

Step	Procedure (Vacuum)	
1.	Set to vacuum operation (-).	11
2.	Open the refill valve (1 turn).	5
3.	Wind the volume adjuster to mid-range or fully clockwise.	9
4.	Seal the system.	4
5.	Set the vacuum with the pump.	12
6.	Adjust the vacuum (+ decrease; - increase).	9

Step	Procedure (Pressure)	
1.	Set to pressure operation (+).	11
2.	Wind the volume adjuster to mid-range.	9
3.	Seal the system.	4
4.	Use the pump to set a pressure up to ≈ 20 bar (300 psi).	12
5.	Open the refill valve (1 turn). You now have full control to increase (+) or decrease (-) the pressure with the volume adjuster.	5 9
6.	If you increase pressure and get to the limit of travel, close the refill valve and wind the volume adjuster fully counterclockwise. There is no change in pressure.	5 9
7.	Refill the pressure mechanism with the pump (≈ 15 cycles) and wind the volume adjuster clockwise until the pressure starts to increase.	12 9
8.	Continue to do steps 5 to 7 until you get the necessary pressure.	

S3 PV 623 models: Start operations

A2.3 (Front cover)

S3.1 ***Fill the reservoir.*** Figure A4 (front cover). The first time you want to use the hydraulic pressure station, use this procedure to fill the reservoir:

Step	Procedure
1.	Use the applicable adaptor to attach the device; figure A3. 2
2.	Remove the hydraulic pressure release valve. 4
3.	Use the refill bottle to add the necessary hydraulic fluid but leave a small air gap. 4

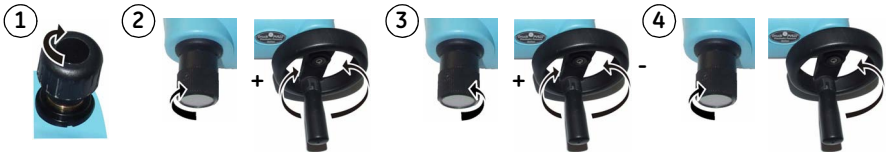
Step	Procedure
4.	To remove air from the pressure mechanism, wind the volume adjuster through one full cycle (counterclockwise then clockwise). 9
5.	Seal the system and continue with the normal pressure operation. 4

S3.2 Release the pressure/Attach the device under test

Step	Procedure
1.	Release the pressure: Open the refill valve (1 turn) then fully open the pressure release valve. 10 4
2.	Use the applicable adaptor to attach the device; figure A3. 2

Note: *Fill the reservoir before you attach the device. See figure A4 (front cover).*

S3.3 Hydraulic pressure operation



Step	Procedure
1.	Seal the system. 4
2.	Close the refill valve and then wind the volume adjuster fully clockwise and counterclockwise until the pressure starts to increase. 10 9 The counterclockwise operation refills the pressure mechanism without a change in pressure.

Step	Procedure
3.	Open the refill valve (1 turn). You now have full control to increase (+) or decrease (-) the pressure with the volume adjuster. 10 9
4.	If you increase pressure and get to the limit of travel, close the refill valve again and wind the volume adjuster fully counterclockwise. 10 9
5.	Continue to do steps 2 to 4 until you get the necessary pressure.

1 Overview

There are three pressure stations in the PV 62x series:

PV 621

PV 622

- two pneumatic pressure stations to give you accurate and controlled pressure and vacuum conditions:

  PV 621: -950 mbar to 20 bar (-13.5 to 300 psi) version
  PV 622: -950 mbar to 100 bar (-13.5 to 1500 psi) version

PV 623

- one hydraulic pressure station to give you accurate and controlled hydraulic pressure conditions:

  PV 623: 0 to 1000 bar (15000 psi)

1.1 Other module options

The pressure stations are part of a set of hand-held modules that you can quickly put together to include a wide range of calibrator functions.

Pressure calibrator

DPI 620 Pressure calibrator: You can use the pressure stations on their own or you can attach the DPI 620 calibrator and a PM 620 module to make a fully integrated pressure calibrator instrument.

DPI 620

Advanced modular calibrator, DPI 620: *Optional item.* This is a battery-powered instrument for electrical measure and source operations and HART® communications. It also supplies the power and user interface functions for all the add-on modules. You can use the touch-screen to display up to six different parameters. Refer to user manual - K0449.

PM 620

Pressure modules, PM 620: *Optional item.* These modules attach to a pressure station (PV 62x) to give the DPI 620 calibrator the necessary pressure measurement functionality. They are fully interchangeable “plug and play” modules with no initial set-up or user calibration.

2 Standard equipment

These items are part of the standard equipment with a PV 62x pressure station:

- Removable pressure adaptors (G1/4 and 1/8 NPT)
- PV 623 models only: Refill bottle for hydraulic fluid
- Safety and quick reference guide
- CD with the user manual

3 Safety

Before you use the instrument, make sure that you read and understand all the related data. This includes: the applicable local safety procedures, the user manual (K0457), and the instructions for the accessories/options/equipment you are using it with.

General warnings

⚠ WARNING ⚠

- **It is dangerous to ignore the specified limits for the instrument or to use the instrument when it is not in its normal condition. Use the applicable protection and obey all safety precautions.**
- **Do not use the instrument in locations with explosive gas, vapour or dust. There is a risk of an explosion.**

Pressure warnings

- **It is dangerous to attach an external source of pressure to a PV 62x series pressure station. Use only the internal mechanisms to set and control the pressure in the pressure station.**
- **Some liquid and gas mixtures are dangerous. This includes mixtures that occur because of contamination. Make sure that the equipment is safe to use with the necessary media.**
- **To prevent a dangerous release of pressure, isolate and bleed the system before you disconnect a pressure connection.**
- **To prevent a dangerous release of pressure, make sure that all the related pipes, hoses and equipment have the correct pressure rating, are safe to use and are correctly attached.**

Continued

Electrical warnings

If you use the DPI 620 calibrator with your pressure station, these warnings are also applicable:

- **To prevent electrical shocks or damage to the instrument, do not connect more than 30V between the terminals, or between the terminals and the ground (earth).**
- **This instrument uses a Lithium-Polymer (Li-Polymer) battery pack. To prevent an explosion or fire, do not short circuit, do not disassemble, keep it safe from damage.**
- **To prevent an explosion or fire, use only the GE specified battery, power supply and battery charger.**

Cautions

To prevent damage to the PM 620 module, only use it within the specified pressure limit on the label.

To prevent damage to the instrument, do not let dirt get into the pressure mechanism. Clean the equipment before you attach it.

Before you start an operation or procedure in this publication, make sure that you have the necessary skills (if necessary, with qualifications from an approved training establishment). Follow good engineering practice at all times.

Marks and symbols on the instrument

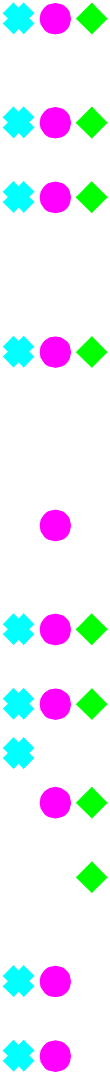
CE	Complies with European Union directives		Warning - refer to the manual
	Read the manual	**PRV**	Pressure relief valve
	Do not dispose of this product as household waste. Refer to “Maintenance” (Section 6).		
More marks and symbols are specified in the user manual (K0457 - Druck PV 62x pneumatic/hydraulic pressure stations)			

4 Parts

Refer to the figures on the front cover (A2, B1).

4.1 Key to figure A2 (PV 62x pressure stations)

A2



1.	Optional accessory: Pressure connection for a pressure relief valve (PRV); see table A1.3 (front cover). A blanking plug is standard.
2.	Test port: Pressure connection (G1/8 or 1/8NPT) to attach the device under test; see figure A3 (front cover).
3.	Pressure and electrical connections for a PM 620 module. PV 621/PV 622 models: Seal the pressure connection with a blanking plug (Part: IO620-BLANK) or a PM 620 module. PV 623 models only: The pressure connection seals itself.
4.	Pneumatic pressure release valve (PV 621/PV 622 models) or hydraulic pressure release valve (PV 623 models) to release pressure in the system. On PV 623 models, it also gives access to the hydraulic fluid reservoir; see figure A4 (front cover).
5.	PV 622 models only: Pneumatic refill valve. Close it to seal off the device pressure and refill the pressure mechanism (refer to “Quick Reference”, S2).
6.	Moulded compartment for the DPI 620 calibrator with electrical connections and a mechanism to hold it in position.
7.	Push-button mechanism to release the DPI 620 calibrator.
8.	PV 621 models only: Pneumatic volume adjuster
9.	PV 622/PV 623 models only: Volume adjuster wheel with fold-in handle.
10.	PV 623 models only: Hydraulic refill valve. Close it to seal off the device pressure and refill the pressure mechanism with fluid (refer to “Quick Reference”, S3).
11.	PV 621/PV 622 models only: Pressure/vacuum selector to set the pump operation: pressure (+), vacuum (-).
12.	PV 621/PV 622 models only: Pump mechanism

4.2 Key to figure B1 (PM 620 module) - Optional item

B1

13.	Pressure module (PM 620) with a pressure connection, reference port (a) and a label. The label includes: *Pressure limit*. Example: 20 bar g (g: gauge; a: absolute); *serial number* (S/N); *manufacturer*: name, address, website

5 Installation

Before you start:

- Read and understand the “Safety” section.
- Do not use damaged equipment.

Note: *Use only original parts supplied by the manufacturer.*

5.1 External pressure connections

See figure A3 (front cover). Use an applicable method to seal the external pressure connections, and then tighten to the applicable torque. Maximum torque:

1/8 NPT: 35 Nm (26 lbf.ft)

G1/8: 25 Nm (18.4 lbf.ft)

5.2 Calibrator assembly

*Optional item (*DPI 620/PM 620*)*. See figure B2 (front cover).

Note: *To use the DPI 620 calibrator, read the user manuals: K0449 (Druck DPI 620 Advanced modular calibrator) and K0457 (Druck PV 62x pneumatic/hydraulic pressure stations).*

B2

Step	Procedure
1.	Lower the calibrator into the moulded compartment.
2.	Press on the bottom end of the calibrator until it latches in position.
3.	Attach a pressure module with the correct range and type.
4.	Tighten it until it is hand tight only.

6 Maintenance

Clean the case with a moist, lint-free cloth and a weak detergent. Do not use solvents or abrasive materials.

Return the instrument to the manufacturer or an approved service agent for all repairs.

Do not dispose of this product as household waste. Use an approved organisation that collects and/or recycles waste electrical and electronic equipment. For more information, contact one of these:

- our customer service department: (Contact us at www.gesensing.com)
- your local government office.

7 Specification

Table 1: *General specification*

Operating temperature	-10 to 50°C (14 to 122°F) ***Note:*** *PV 623 models only. If the temperature is less than 4°C (39°F), the instrument must be fully drained and dry.*
Storage temperature	-20 to 70 °C (-4 to 158 °F) ***Note:*** *PV 623 models only. If the temperature is less than 4°C (39°F), the instrument must be fully drained and dry.*
Humidity	0 to 90% relative humidity (RH) non-condensing
Shock/Vibration	Def Stan 66-31, 8.4 cat III
EMC	Electromagnetic compatibility: BS EN 61326-1:2006
Electrical safety	Electrical - BS EN 61010:2001
Pressure safety	Pressure Equipment Directive - Class: Sound Engineering Practice (SEP)
Approved	CE Marked
Hydraulic fluid (PV 623 models only)	Reservoir capacity: 100 cm^3 (6.1 in^3) Fluid type: Demineralised water or a mineral oil (ISO viscosity grade $\leq$ 22)
Power supply	None. If you attach a DPI 620 calibrator to make a pressure calibrator, all the power comes from the DPI 620 calibrator. Refer to user manual K0449 - Druck DPI 620 Advanced modular calibrator.